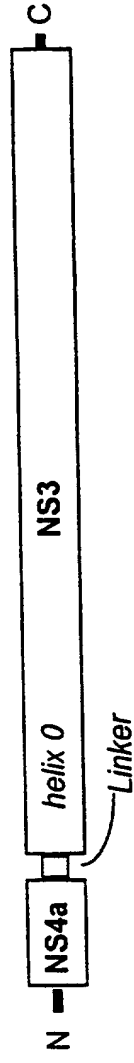
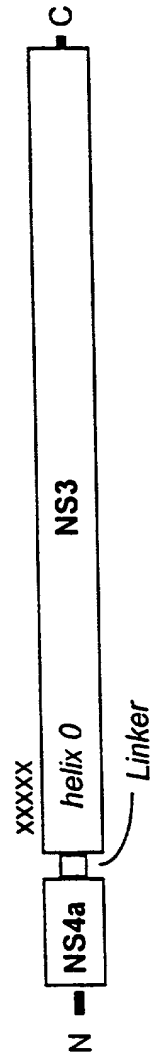


FIG. 1

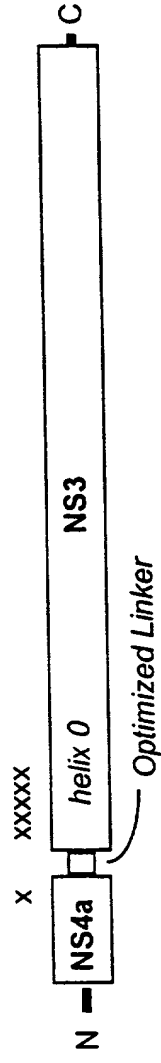
SEQ ID NO:3



SEQ ID NO:5,



SEQ ID NO:14



SEQ ID NO:18

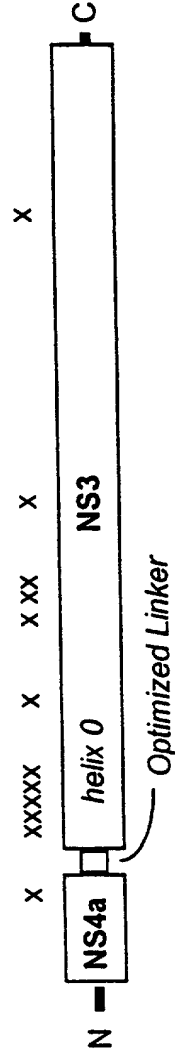


FIG. 2

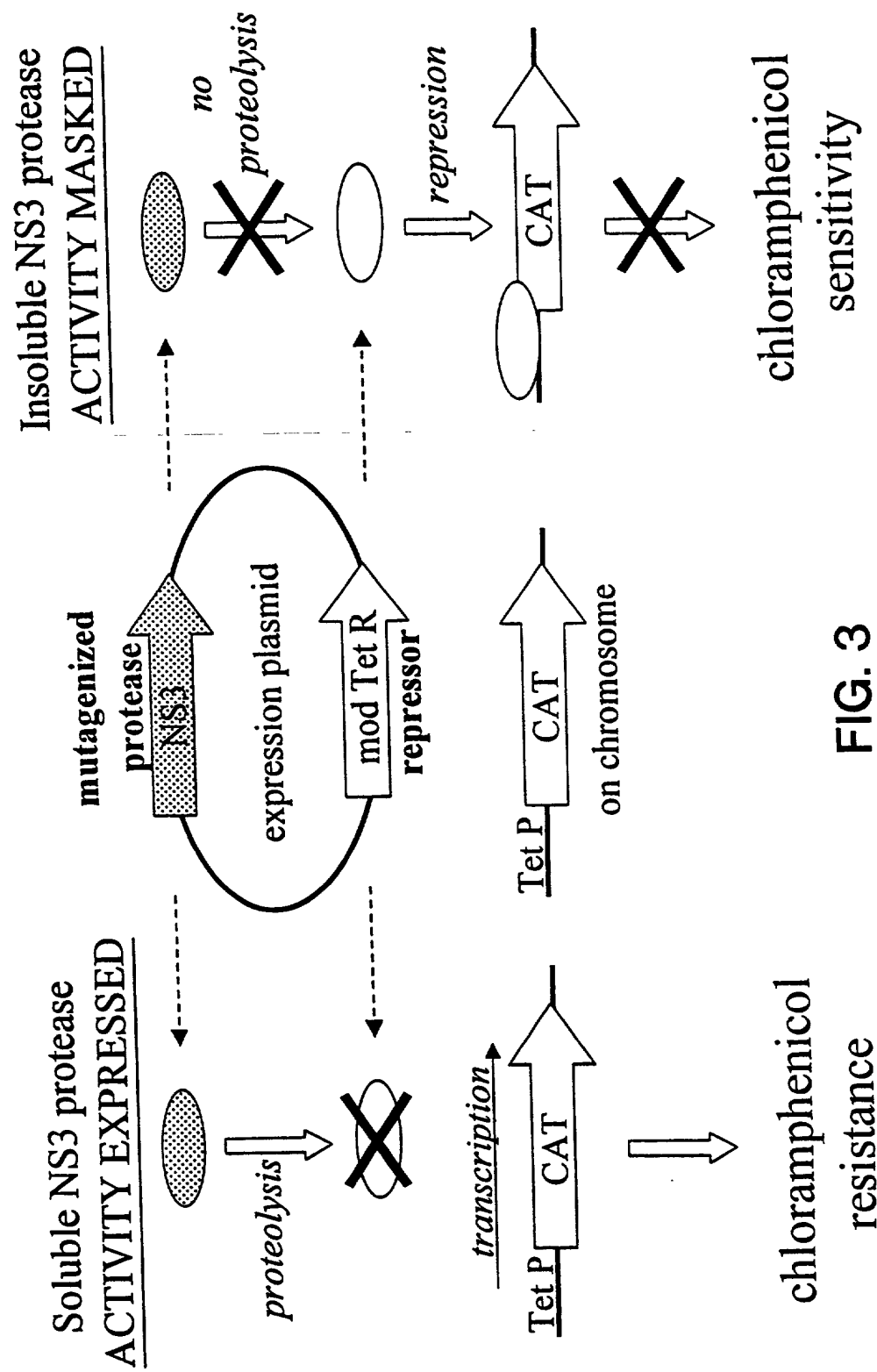
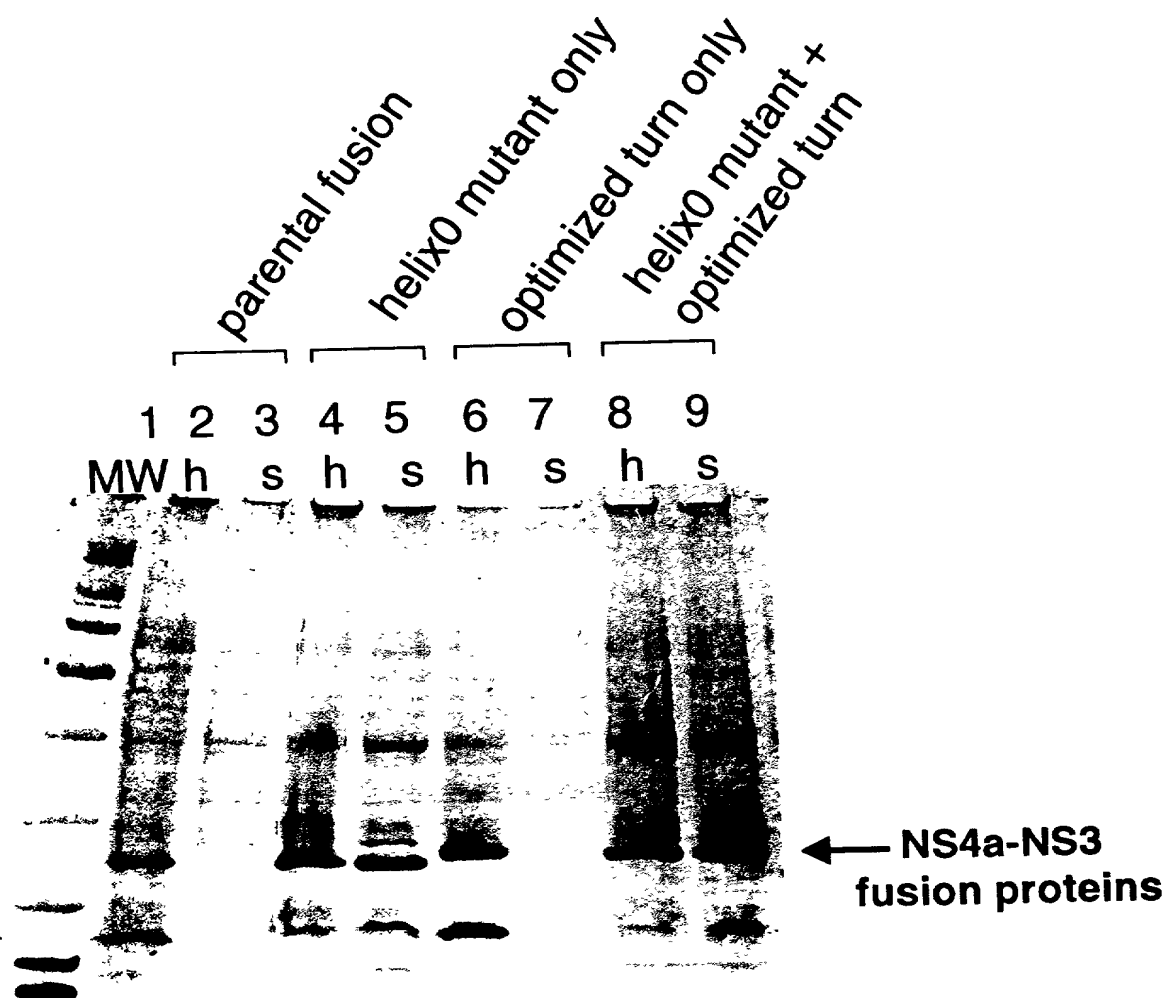


FIG. 3



h = homogenate; s = supernatant

FIG. 4

002660 4695360

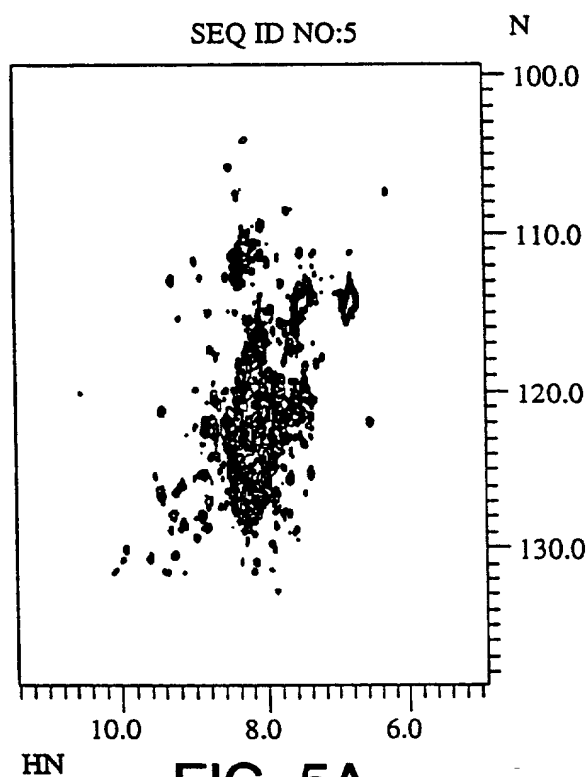


FIG. 5A

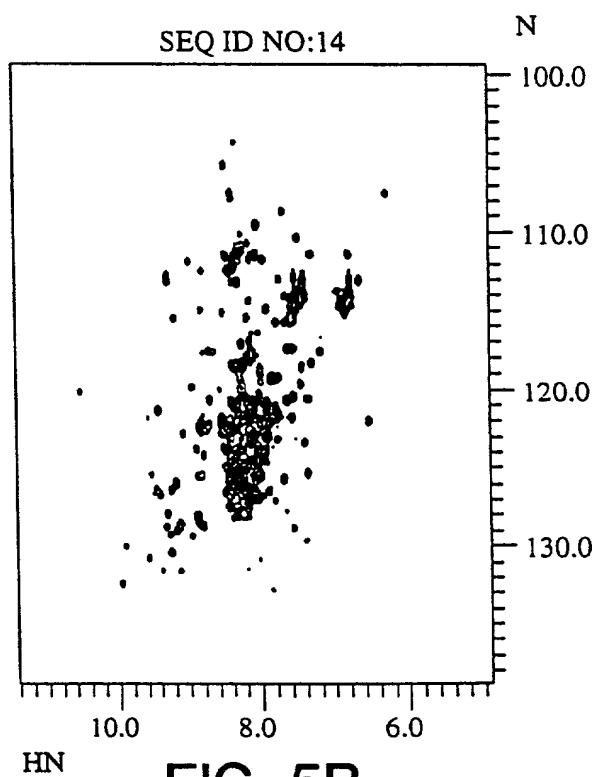


FIG. 5B

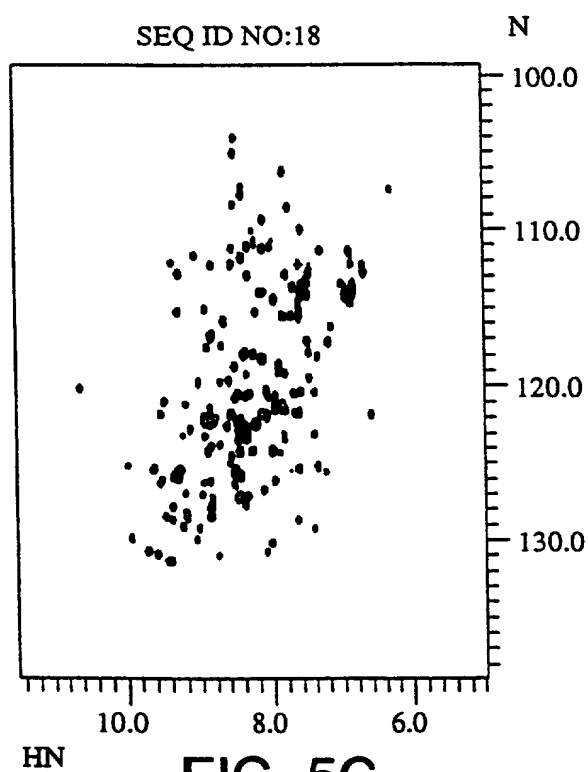


FIG. 5C

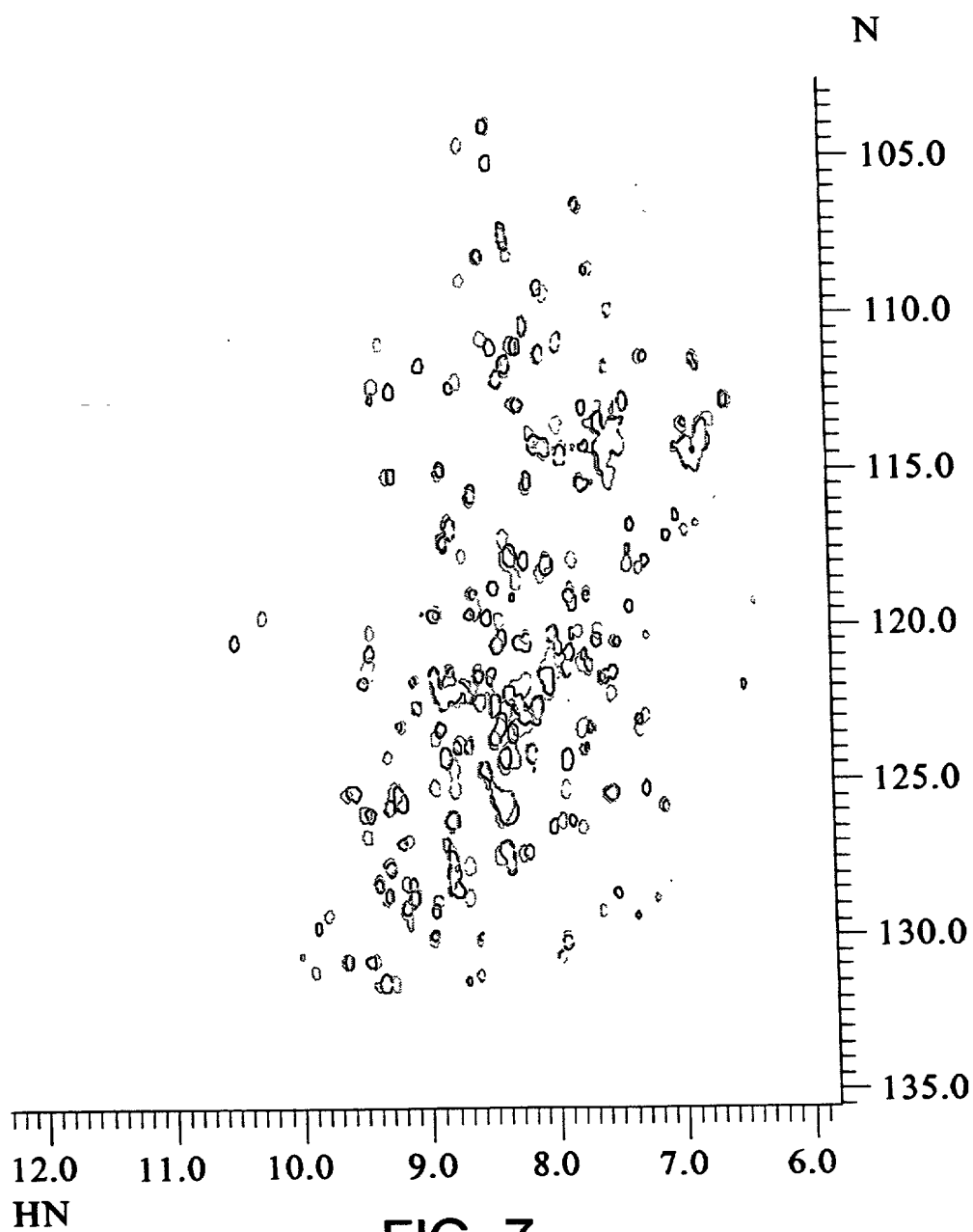
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Seq ID NO:14	MKKKGSVWIVGRIVL-NG-AYAAQQTGRGLLGCIIITSLTGRDKNQVEGEVQIVSTAAQTFLATCINGVCVTVYHGAGTRTIA					
Seq ID NO:16	MKKKGSVWIVGRIVL-NG-AYAAQQTREEGCQETSQTGRDKNQVEGEVQIVSTAAQTFLATCINGVCVTVYHGAGTRTIA					
Seq ID NO:18	MKKKGSVWIVGRINI-NG-AYAAQQTREEGCQETSQTGRDKNQVEGEVQIVSTAAQTFLATCINGVCVTVYHGAGTRTIA					
Seq ID NO:20	MKKKGSVWIVGRINI-NG-AYAAQQTREEGCQETSQTGRDKNQVEGEVQIVSTAAQTFLATCINGVCVTVYHGAGTRTIA					
Seq ID NO:22	MKKKGSVWIVGRINI-NG-AYAAQQTREEGCQETSQTGRDKNQVEGEVQIVSTAAQTFLATCINGVCVTVYHGAGTRTIA					
Seq ID NO:24	MKKKGSVWIVGRINI-NG-AYAAQQTREEGCQETSQTGRDKNQVEGEVQIVSTAAQTFLATCINGVCVTVYHGAGTRTIA					

Seq ID NO:1	1	1	1	1	1	1
Seq ID NO:3	7	8	9	0	1	4
Seq ID NO:12	0	0	0	0	2	0
Seq ID NO:14	SPKGPVIQMYTNVVDKDLVGPAPQGSRSLTPCTCGSSDLYLVTRHADVI PVRRRGDSRGSLLSPRPI SYLKGSSGGPLLC					
Seq ID NO:16	SPKGPVIQMYTNVVDKDLVGPAPQGSRSLTPCTCGSSDLYLVTRHADVI PVRRRGDSRGSLLSPRPI SYLKGSSGGPLLC					
Seq ID NO:18	SPKGPVIQMYTNVVDKDLVGPAPQGSRSLTPCTCGSSDLYLVTRHADVI PVRRRGDSRGSLLSPRPI SYLKGSSGGPLLC					
Seq ID NO:20	SPKGPVIQMYTNVVDKDLVGPAPQGSRSLTPCTCGSSDLYLVTRHADVI PVRRRGDSRGSLLSPRPI SYLKGSSGGPLLC					
Seq ID NO:22	SPKGPVIQMYTNVVDKDLVGPAPQGSRSLTPCTCGSSDLYLVTRHADVI PVRRRGDSRGSLLSPRPI SYLKGSSGGPLLC					
Seq ID NO:24	SPKGPVIQMYTNVVDKDLVGPAPQGSRSLTPCTCGSSDLYLVTRHADVI PVRRRGDSRGSLLSPRPI SYLKGSSGGPLLC					

Seq ID NO:1	1	1	1	1	1	1
Seq ID NO:3	5	6	7	8	8	8
Seq ID NO:12	0	0	0	0	0	0
Seq ID NO:14	PAGHAVGIFRAAVCTRGVAKAVDFIPVESLETMRSP--					
Seq ID NO:16	PAGHAVGIFRAAVCTRGVAKAVDFIPVESLETMRSP--					
Seq ID NO:18	PAGHAVGIFRAAVCTRGVAKAVDFIPVESLETMRSP--					
Seq ID NO:20	PAGHAVGIFRAAVCTRGVAKAVDFIPVESLETMRSP--					
Seq ID NO:22	PAGHAVGIFRAAVCTRGVAKAVDFIPVESLETMRSP--					
Seq ID NO:24	PAGHAVGIFRAAVCTRGVAKAVDFIPVESLETMRSP--					

FIG. 6

602600 4655360



60260 465560

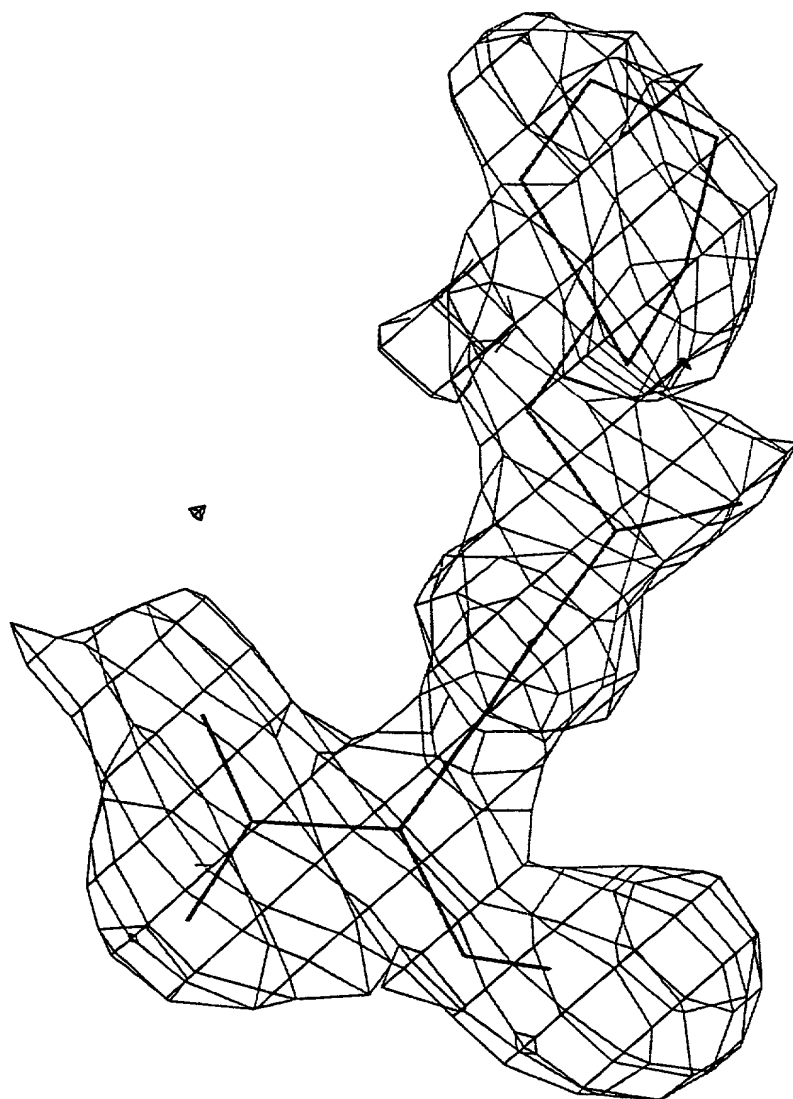


FIG. 8

1.00 Å

M A P I T A Y A Q Q T R G L L G C I I T
 1 ATGGCTCCGAT CACCGCTTA CGCTCAGCAG ACCCGTGGTC TGCTGGGTTG CATCATCACC
 TACCGAGGCT AGTGGCGAAT GCGAGTCGTC TGGGCACCAG ACGACCCAAC GTAGTAGTGG

 S L T G R D K N Q V E G E V Q I V S T A
 61 TCCCTGACCG GTCGTGACAA AAACCAGGTT GAAGGTGAAG TTCAGATCGT TTCCACCGCT
 AGGGACTGGC CAGCACTGTT TTTGGTCCAA CTTCCACTTC AAGTCTAGCA AAGGTGGCGA

 A Q T F L A T C I N G V C W T V Y H G A
 121 GCTCAGACCT TCCTGGGCTAC CTGCATCAAC GGTGTTTGCT GGACCGTTTA CCACGGTGCT
 CGAGTCTGGA AGGACCGATG GACGTAGTTG CCACAAACGA CCTGGCAAAT GGTGCCACGA

 G T R T I A S P K G P V I Q M Y T N V D
 181 GGTACCCGTA CCATCGCTTC CCCGAAAGGT CCGGTTATCC AGATGTACAC CAACGTTGAC
 CCATGGGCAT GGTAGCGAAG GGGCTTTCCA GGCCAATAGG TCTACATGTG GTTGCAACTG

 K D L V G W P A P Q G S R S L T P C T C
 241 AAAGACCTGG TTGGTTGGCC GGCTCCGCAG GGTTCCTCGTT CCCTGACCCC GTGCACCTGC
 TTTCTGGACC AACCAACCGG CCGAGGCGTC CCAAGGGCAA GGGACTGGGG CACGTGGACG

 G S S D L Y L V T R H A D V I P V R R R
 301 GGTTCCTCCG ACCTGTACCT GGTACCCGT CACGCTGACG TTATCCCGGT TCGTCGTCGT
 CCAAGGAGGC TGGACATGGA CCAATGGGCA GTGCGACTGC AATAGGGCCA AGCAGCAGCA

 G D S R G S L L S P R P I S Y L K G S S
 361 GGTGACTCCC GTGGTTCCCT GCTGTCCCCG CGTCCGATCT CCTACCTGAA AGGTTCCCTCC
 CCACTGAGGG CACCAAGGGA CGACAGGGGC GCAGGCTAGA GGATGGACTT TCCAAGGAGG

 G G P L L C P A G H A V G I F R A A V C
 421 GGTGGTCCGC TGCTGTGCCC GGCTGGTCAC GCTGTTGGTA TCTTCCGTGC TGCTGTTTGC
 CCACCAGGCG ACGACACGGG CCGACCAGTG CGACAACCAT AGAAGGCACG ACGACAAACG

 T R G V A K A V D F I P V E S L E T T M
 481 ACCCGTGGTG TTGCTAAAGC TGTTGACTTC ATCCCGGTTG AATCCCTGGA AACCACCATG
 TGGGCACCAC AACGATTTTC ACAACTGAAG TAGGGCCAAC TTAGGGACCT TTGGTGGTAC

 R S *
 541 CGTTCCTGA
 GCAAGGACT

FIG. 9

M K K K G S V V I V G R I V L N G A Y A
1 ATGAAAAAAA AAGGTTCCGT TGTTATCGTC GGCCGTATAG TACTGAACGG TGCTTACGCT
TACTTTTTTT TTCCAAGGCA ACAATAGCAG CCGGCATATC ATGACTTGCC ACGAATGCGA

Q Q T R G L L G C I I T S L T G R D K N
61 CAGCAGACTC GAGGTCTGCT GGGTTGCATC ATCACCTCCC TGACCGGTCG TGACAAAAAC
GTCGTCTGAG CTCCAGACGA CCCAACGTAG TAGTGGAGGG ACTGGCCAGC ACTGTTTTTG

Q V E G E V Q I V S T A A Q T F L A T C
121 CAGGTTGAAG GTGAAGTTCA GATCGTTTCC ACCGCTGCTC AGACCTTCCT GGCTACCTGC
GTCCAACCTC CACTTCAAGT CTAGCAAAGG TGGCGACGAG TCTGGAAGGA CCGATGGACG

I N G V C W T V Y H G A G T R T I A S P
181 ATCAACGGTG TTTGCTGGAC CGTTTACCAC GGTGCTGGTA CCCGTACCAT CGCTTCCCCG
TAGTTGCCAC AAACGACCTG GCAAATGGTG CCACGACCAT GGGCATGGTA GCGAAGGGGC

K G P V I Q M Y T N V D K D L V G W P A
241 AAAGGTCCGG TTATCCAGAT GTACACCAAC GTTGACAAAG ACCTGGTTGG TTGGCCGGCT
TTTCCAGGCC AATAGGTCTA CATGTGGTTG CAACTGTTTC TGGACCAACC AACC GGCCGA

P Q G S R S L T P C T C G S S D L Y L V
301 CCGCAGGGTT CCCGTTCCCT GACCCCGTGC ACCTGCGGTT CCTCCGACCT GTACCTGGTT
GGCGTCCCAA GGGCAAGGGA CTGGGGGCACG TGGACGCCAA GGAGGCTGGA CATGGACCAA

T R H A D V I P V R R R G D S R G S L L
361 ACCCGTCACG CTGACGTTAT CCCGGTTTCGT CGTCGTGGTG ACTCCCGTGG TTCCCTGCTG
TGGGCAGTGC GACTGCAATA GGGCCAAGCA GCAGCACCAC TGAGGGCACC AAGGGACGAC

S P R P I S Y L K G S S G G P L L C P A
421 TCCCCGCGTC CGATCTCCTA CCTGAAAGGT TCCTCCGGTG GTCCGCTGCT GTGCCCCGGCT
AGGGGCGCAG GCTAGAGGAT GGACTTTCCA AGGAGGCCAC CAGGCGACGA CACGGGCCGA

G H A V G I F R A A V C T R G V A K A V
481 GGTCACGCTG TTGGTATCTT CCGTGCTGCT GTTTGCACCC GTGGTGTGTC TAAAGCTGTT
CCAGTGCGAC AACCATAGAA GGCACGACGA CAAACGTGGG CACCACAACG ATTTGACAA

D F I P V E S L E T T M R S P *
541 GACTTCATCC CGGTTGAATC CCTGGAAACC ACCATGCGTT CCCCCTGA
CTGAAGTAGG GCCAACTTAG GGACCTTTGG TGGTACGCAA GGGGCACT

FIG. 10

						L ₁₃	L ₁₄			I ₁₇	I ₁₈			L ₂₁		
Wild-type	(5)	Q	Q	T	R	G	L	L	G	C	I	I	T	S	L	T
Helix0-1	(6)	.	.	.	.	.	E	E	.	.	Q	E	.	.	Q	.
Helix0-3	(7)	.	.	.	.	.	E	E	.	.	Q	Q	.	.	E	.
Helix0-4	(8)	.	.	.	.	.	N	Q	.	.	E	K	.	.	E	.
Helix0-7	(9)	.	.	.	.	.	E	Q	.	.	Q	K	.	.	H	.
Helix0-8	(10)	.	.	.	.	.	E	Q	.	.	D	E	.	.	E	.
Helix0-10	(11)	.	.	.	.	.	E	E	.	.	E	Q	.	.	E	.

FIG. 11

M K K K G S V V I V G R I V L N G A Y A
 1 ATGAAAAA AAGGATCCGT TGTTATCGTC GGCCGTATAG TACTGAACGG TGCTTACGCT
 TACTTTTTTT TTCCTAGGCA ACAATAGCAG CCGGCATATC ATGACTTGCC ACGAATGCGA

 Q Q T R G E E G C Q E T S Q T G R D K N
 61 CAGCAGACTC GAGGTGAGGA GGGTTGCCAA GAAACCTCCC AGACCGGTCG TGACAAAAAC
 GTCGTCTGAG CTCCACTCCT CCCAACGGTT CTTTGGAGGG TCTGGCCAGC ACTGTTTTTG

 Q V E G E V Q I V S T A A Q T F L A T C
 121 CAGGTTGAAG GTGAAGTTCA GATCGTTTCC ACCGCTGCTC AGACCTTCCT GGCTACCTGC
 GTCCAACTTC CACTTCAAGT CTAGCAAAGG TGGCGACGAG TCTGGAAGGA CCGATGGACG

 I N G V C W T V Y H G A G T R T I A S P
 181 ATCAACGGTG TTTGCTGGAC CGTTTACCAC GGTGCTGGTA CCCGTACCAT CGCTTCCCCG
 TAGTTGCCAC AAACGACCTG GCAAATGGTG CCACGACCAT GGGCATGGTA GCGAAGGGGC

 K G P V I Q M Y T N V D K D L V G W P A
 241 AAAGGTCCGG TTATCCAGAT GTACACCAAC GTTGACAAAG ACCTGGTTGG TTGGCCGGCT
 TTTCCAGGCC AATAGGTCTA CATGTGGTTG CAACTGTTTC TGGACCAACC AACCGGCCGA

 P Q G S R S L T P C T C G S S D L Y L V
 301 CCGCAGGGTT CCCGTTCCCT GACCCCGTGC ACCTGCGGTT CCTCCGACCT GTACCTGGTT
 GCGTCCCAA GGGCAAGGGA CTGGGGCAGC TGGACGCCAA GGAGGCTGGA CATGGACCAA

 T R H A D V I P V R R R G D S R G S L L
 361 ACCCGTCACG CTGACGTTAT CCCGGTTTCG CTGCTGGTG ACTCCCGTGG TTCCCTGCTG
 TGGGCAGTGC GACTGCAATA GGGCCAAGCA GCAGCACCAC TGAGGGCACC AAGGGACGAC

 S P R P I S Y L K G S S G G P L L C P A
 421 TCCCCGCGTC CGATCTCCTA CCTGAAAGGT TCCTCCGGTG GTCCGCTGCT GTGCCCGGCT
 AGGGGCGCAG GCTAGAGGAT GGACTTTCCA AGGAGGCCAC CAGGCGACGA CACGGGCCGA

 G H A V G I F R A A V C T R G V A K A V
 481 GGTCACGCTG TTGGTATCTT CCGTGCTGCT GTTTGCACCC GTGGTGTTCG TAAAGCTGTT
 CCAGTGCGAC AACCATAGAA GGCACGACGA CAAACGTGGG CACCACAACG ATTTGACAA

 D F I P V E S L E T T M R S P *
 541 GACTTCATCC CGGTTGAATC CCTGGAAACC ACCATGCGTT CCCCCTGA
 CTGAAGTAGG GCCAAGTTAG GGACCTTTGG TGGTACGCAA GGGGCACT

FIG. 12

	M	K	K	K	G	S	V	V	I	V	G	R	I	N	L	S	G	D	T	A
1	ATGAAAAAAA	AAGGATCCGT	TGTTATCGTC	GGCCGTATCA	ACCTGTCCGG	TGACACCGCT	TACTTTTTTT	TTCCTAGGCA	ACAATAGCAG	CCGGCATAGT	TGGACAGGCC	ACTGTGGCGA								
	Y	A	Q	Q	T	R	G	E	E	G	C	Q	E	T	S	Q	T	G	R	D
61	TACGCTCAGC	AGACTCGAGG	TGAGGAGGGT	TGCCAAGAAA	CCTCCCAGAC	CGGTCGTGAC	ATGCGAGTCG	TCTGAGCTCC	ACTCCTCCCA	ACGGTTCTTT	GGAGGGTCTG	GCCAGCACTG								
	K	N	Q	V	E	G	E	V	Q	I	V	S	T	A	A	Q	T	F	L	A
121	AAAAACCAGG	TTGAAGGTGA	AGTTCAGATC	GTTTCCACCG	CTGCTCAGAC	CTTCCTGGCT	TTTTTGGTCC	AACTTCCACT	TCAAGTCTAG	CAAAGGTGGC	GACGAGTCTG	GAAGGACCGA								
	T	C	I	N	G	V	C	W	T	V	Y	H	G	A	G	T	R	T	I	A
181	ACCTGCATCA	ACGGTGTTTG	CTGGACCGTT	TACCACGGTG	CTGGTACCCG	TACCATCGCT	TGGACGTAGT	TGCCACAAAC	GACCTGGCAA	ATGGTGCCAC	GACCATGGGC	ATGGTAGCGA								
	S	P	K	G	P	V	I	Q	M	Y	T	N	V	D	K	D	L	V	G	W
241	TCCCCGAAAG	GTCCGGTTAT	CCAGATGTAC	ACCAACGTTG	ACAAAGACCT	GGTTGGTTGG	AGGGGCTTTC	CAGGCCAATA	GGTCTACATG	TGGTTGCAAC	TGTTTCTGGA	CCAACCAACC								
	P	A	P	Q	G	S	R	S	L	T	P	C	T	C	G	S	S	D	L	Y
301	CCGGCTCCGC	AGGGTTCCCG	TTCCTTGACC	CCGTGCACCT	GCGGTTCCCT	CGACCTGTAC	GGCCGAGGCG	TCCCAAGGGC	AAGGGACTGG	GGCACGTGGA	CGCCAAGGAG	GCTGGACATG								
	L	V	T	R	H	A	D	V	I	P	V	R	R	R	G	D	S	R	G	S
361	CTGGTTACCC	GTCACGCTGA	CGTTATCCCG	GTTTCGTCGTC	GTGGTGACTC	CCGTGGTTCC	GACCAATGGG	CAGTGCGACT	GCAATAGGGC	CAAGCAGCAG	CACCACTGAG	GGCACCAAGG								
	L	L	S	P	R	P	I	S	Y	L	K	G	S	S	G	G	P	L	L	C
421	CTGCTGTCCC	CGCGTCCGAT	CTCCTACCTG	AAAGGTTCCCT	CCGGTGGTCC	GCTGCTGTGC	GACGACAGGG	GCGCAGGCTA	GAGGATGGAC	TTTCCAAGGA	GGCCACCAGG	CGACGACACG								
	P	A	G	H	A	V	G	I	F	R	A	A	V	C	T	R	G	V	A	K
481	CCGGCTGGTC	ACGCTGTTGG	TATCTTCCGT	GCTGCTGTTT	GCACCCGTGG	TGTTGCTAAA	GGCCGACCAG	TGCGACAACC	ATAGAAGGCA	CGACGACAAA	CGTGGGCACC	ACAACGATTT								
	A	V	D	F	I	P	V	E	S	L	E	T	T	M	R	S	P	*		
541	GCTGTTGACT	TCATCCCGGT	TGAATCCCTG	GAAACCACCA	TGCGTTCCCC	GTGA	CGACAACCTGA	AGTAGGGCCA	ACTTAGGGAC	CTTTGGTGGT	ACGCAAGGGG	CACT								

FIG. 13

M K K K G S V V I V G R I N L S G D T A
 1 ATGAAAAAA AAGGATCCGT TGTTATCGTC GGCCGATATCA ACCTGTCCGG TGACACCGCT
 TACTTTTTTT TTCCTAGGCA ACAATAGCAG CCGGCATAGT TGGACAGGCC ACTGTGGCGA

 Y A Q Q T R G E E G C Q E T S Q T G R D
 61 TACGCTCAGC AGACTCGAGG TGAGGAGGGT TGCCAAGAAA CCTCCCAGAC CGGTCGTGAC
 ATGCGAGTCG TCTGAGCTCC ACTCCTCCCA ACGGTTCTTT GGAGGGTCTG GCCAGCACTG

 K N Q V E G E V Q I V S T A T Q T F L A
 121 AAAAACCAGG TTGAAGGTGA AGTTCAGATC GTTTCACCG CTACCCAGAC CTTCTGGCT
 TTTTGGTCC AACTTCCACT TCAAGTCTAG CAAAGGTGGC GATGGGTCTG GAAGGACCGA

 T C I N G V C W T V Y H G A G T R T I A
 181 ACCTGCATCA ACGGTGTTTG CTGGACCGTT TACCACGGTG CTGGTACCCG TACCATCGCT
 TGGACGTAGT TGCCACAAAC GACCTGGCAA ATGGTGCCAC GACCATGGGC ATGGTAGCGA

 S P K G P V T Q M Y T N V D K D L V G W
 241 TCCCCGAAAG GTCCGGTTAC CCAGATGTAC ACCAACGTTG ACAAAGACCT GGTGTTGG
 AGGGGCTTTC CAGGCCAATG GGTCTACATG TGGTTGCAAC TGTTTCTGGA CCAACCAACC

 Q A P Q G S R S L T P C T C G S S D L Y
 301 CAGGCTCCGC AGGGTTCCCG TTCCCTGACC CCGTGACCT GCGGTTCCCTC CGACCTGTAC
 GTCCGAGGCG TCCCAAGGGC AAGGGACTGG GGCACGTGGA CGCCAAGGAG GCTGGACATG

 L V T R H A D V I P V R R R G D S R G S
 361 CTGGTTACCC GTCACGCTGA CGTTATCCCG GTTCGTCGTC GTGGTGACTC CCGTGGTTCC
 GACCAATGGG CAGTGCGACT GCAATAGGGC CAAGCAGCAG CACCACTGAG GGCACCAAGG

 L L S P R P I S Y L K G S S G G P L L C
 421 CTGCTGTCCC CGCGTCCGAT CTCCTACCTG AAAGGTTCTT CCGGTGGTCC GCTGCTGTGC
 GACGACAGGG GCGCAGGCTA GAGGATGGAC TTTCCAAGGA GGCCACCAGG CGACGACACG

 P A G H A V G I F R A A V C T R G V A K
 481 CCGGCTGGTC ACGCTGTTGG TATCTTCCGT GCTGCTGTTT GCACCCGTGG TGTTGCTAAA
 GGCCGACCAG TGCGACAACC ATAGAAGGCA CGACGACAAA CGTGGGCACC ACAACGATTT

 A V D F I P V E S L E T T M R S P *
 541 GCTGTTGACT TCATCCCGGT TGAATCCCTG GAAACCACCA TGCGTTCCCC GTGA
 CGACAACCTGA AGTAGGGCCA ACTTAGGGAC CTTTGGTGGT ACGCAAGGGG CACT

FIG. 14

M K K K G S V V I V G R I N L S G D T A
 1 ATGAAAAAAA AAGGATCCGT TGTTATCGTC GGCCGTATCA ACCTGTCCGG TGACACCGCT
 TACTTTTTTT TTCCTAGGCA ACAATAGCAG CCGGCATAGT TGGACAGGCC ACTGTGGCGA

 Y A Q Q T R G E E G C Q E T S Q T G R D
 61 TACGCTCAGC AGACTCGAGG TGAGGAGGGT TGCCAAGAAA CCTCCCAGAC CGGTTCGTGAC
 ATGCGAGTCG TCTGAGCTCC ACTCCTCCCA ACGGTTCTTT GGAGGGTCTG GCCAGCACTG

 K N Q V E G E V Q I V S T A T Q T F L A
 121 AAAAACCAGG TTGAAGGTGA AGTTCAGATC GTTTCCACCG CTACCCAGAC CTTCTCGGCT
 TTTTGGTCC AACTTCCACT TCAAGTCTAG CAAAGGTGGC GATGGGTCTG GAAGGACCGA

 T S I N G V L W T V Y H G A G T R T I A
 181 ACCTCCATCA ACGGTGTTCT GTGGACCGTT TACCACGGTG CTGGTACCCG TACCATCGCT
 TGGAGGTAGT TGCCACAAGA CACCTGGCAA ATGGTGCCAC GACCATGGGC ATGGTAGCGA

 S P K G P V T Q M Y T N V D K D L V G W
 241 TCCCCGAAAG GTCCGGTTAC CCAGATGTAC ACCAACGTTG ACAAAGACCT GGTTGGTTGG
 AGGGGCTTTC CAGGCCAATG GGTCTACATG TGGTTGCAAC TGTTTCTGGA CCAACCAACC

 Q A P Q G S R S L T P C T C G S S D L Y
 301 CAGGCTCCGC AGGGTTCCCG TTCCCTGACC CCGTGCACCT GCGGTTCCCTC CGACCTGTAC
 GTCCGAGGCG TCCCAAGGGC AAGGGACTGG GGCACGTGGA CGCCAAGGAG GCTGGACATG

 L V T R H A D V I P V R R R G D S R G S
 361 CTGGTTACCC GTCACGCTGA CGTTATCCCG GTTCGTCGTC GTGGTGACTC CCGTGGTTCC
 GACCAATGGG CAGTGCGACT GCAATAGGGC CAAGCAGCAG CACCACTGAG GGCACCAAGG

 L L S P R P I S Y L K G S S G G P L L C
 421 CTGCTGTCCC CGCGTCCGAT CTCCTACCTG AAAGGTTTCT CCGGTGGTCC GCTGCTGTGC
 GACGACAGGG GCGCAGGCTA GAGGATGGAC TTTCCAAGGA GGCCACCAGG CGACGACACG

 P A G H A V G I F R A A V S T R G V A K
 481 CCGGCTGGTC ACGCTGTTGG TATCTTCCGT GCTGCTGTTT CCACCCGTGG TGTGCTAAA
 GGCCGACCAG TCGGACAACC ATAGAAGGCA CGACGACAAA GGTGGGCACC ACAACGATTT

 A V D F I P V E S L E T T M R S P *
 541 GCTGTTGACT TCATCCCGGT TGAATCCCTG GAAACCACCA TCGTTCCTCC GTGA
 CGACAACCTGA AGTAGGGCCA ACTTAGGGAC CTTTGGTGGT ACGCAAGGGG CACT

FIG. 15

M K K K G S V V I V G R I N L S G D T A
 1 ATGAAAAAA AAGGATCCGT TGTATCGTC GGCCGTATCA ACCTGTCCGG TGACACCGCT
 TACTTTTTTT TTCCTAGGCA ACAATAGCAG CCGGCATAGT TGGACAGGCC ACTGTGGCGA

 Y A Q Q T R G E Q G C Q K T S H T G R D
 61 TACGCTCAGC AGACTCGAGG TGAGCAGGGT TGCCAGAAGA CCTCCCACAC CGGTCGTGAC
 ATGCGAGTCG TCTGAGCTCC ACTCGTCCCA ACGGTCTTCT GGAGGGTGTG GCCAGCACTG

 K N Q V E G E V Q I V S T A T Q T F L A
 121 AAAAACCAGG TTGAAGGTGA AGTTCAGATC GTTTCACCG CTACCCAGAC CTTCTGGCT
 TTTTGGTCC AACTTCCACT TCAAGTCTAG CAAAGGTGGC GATGGGTCTG GAAGGACCGA

 T S I N G V L W T V Y H G A G T R T I A
 181 ACCTCCATCA ACGGTGTTCT GTGGACCGTT TACCACGGTG CTGGTACCCG TACCATCGCT
 TGGAGGTAGT TGCCACAAGA CACCTGGCAA ATGGTGCCAC GACCATGGGC ATGGTAGCGA

 S P K G P V T Q M Y T N V D K D L V G W
 241 TCCCCGAAAG GTCCGGTTAC CCAGATGTAC ACCAACGTTG ACAAAGACCT GGTGGTTGG
 AGGGGCTTTC CAGGCCAATG GGTCTACATG TGGTTGCAAC TGTTCCTGGA CCAACCAACC

 Q A P Q G S R S L T P C T C G S S D L Y
 301 CAGGCTCCGC AGGGTTCCCG TTCCCTGACC CCGTGACCT GCGGTTCTC CGACCTGTAC
 GTCCGAGGCG TCCAAGGGC AAGGGACTGG GGCACGTGGA CGCCAAGGAG GCTGGACATG

 L V T R H A D V I P V R R R G D S R G S
 361 CTGGTTACCC GTCACGCTGA CGTTATCCCG GTTCGTCGTC GTGGTGA CTG CCGTGGTTCC
 GACCAATGGG CAGTGCGACT GCAATAGGGC CAAGCAGCAG CACCACTGAG GGCACCAAGG

 L L S P R P I S Y L K G S S G G P L L C
 421 CTGCTGTCCC CGCGTCCGAT CTCCTACCTG AAAGGTTTCT CCGGTGGTCC GCTGCTGTGC
 GACGACAGGG GCGCAGGCTA GAGGATGGAC TTTCCAAGGA GGCCACCAGG CGACGACAGC

 P A G H A V G I F R A A V S T R G V A K
 481 CCGGCTGGTC ACGCTGTTGG TATCTTCCGT GCTGCTGTTT CCACCCGTGG TGTTGCTAAA
 GGCCGACCAG TGCACAACC ATAGAAGGCA CGACGACAAA GGTGGGCACC ACAACGATTT

 A V D F I P V E S L E T T M R S P *
 541 GCTGTTGACT TCATCCCGGT TGAATCCCTG GAAACCACCA TCGGTTCCCC GTGA
 CGACAATGA AGTAGGGCCA ACTTAGGGAC CTTTGGTGGT ACGCAAGGGG CACT

FIG. 16

M K K K G S V V I V G R I N L S G D T A
1 ATGAAAAAAA AAGGATCCGT TGTTATCGTC GGCCGTATCA ACCTGTCCGG TGACACCGCT
TACTTTTTTTT TTCCTAGGCA ACAATAGCAG CCGGCATAGT TGGACAGGCC ACTGTGGCGA

Y A Q Q T R G E Q G T Q K T S H T G R D
61 TACGCTCAGC AGACTCGAGG TGAGCAGGGT ACCCAGAAGA CCTCCCACAC CGGTCGTGAC
ATGCGAGTCG TCTGAGCTCC ACTCGTCCCA TGGGTCTTCT GGAGGGTGTG GCCAGCACTG

K N Q V E G E V Q I V S T A T Q T F L A
121 AAAAACCAGG TTGAAGGTGA AGTTCAGATC GTTTCACCG CTACCCAGAC CTTCTGGCT
TTTTTGGTCC AACTTCCACT TCAAGTCTAG CAAAGGTGGC GATGGGTCTG GAAGGACCGA

T S I N G V L W T V Y H G A G T R T I A
181 ACCTCCATCA ACGGTGTTCT GTGGACCGTT TACCACGGTG CTGGTACCCG TACCATCGCT
TGGAGGTAGT TGCCACAAGA CACCTGGCAA ATGGTGCCAC GACCATGGGC ATGGTAGCGA

S P K G P V T Q M Y T N V D K D L V G W
241 TCCCCGAAAG GTCCGGTTAC CCAGATGTAC ACCAACGTTG ACAAAGACCT GGTTGGTTGG
AGGGGCTTTC CAGGCCAATG GGTCTACATG TGTTTGCAAC TGTTTCTGGA CCAACCAACC

Q A P Q G S R S L T P C T C G S S D L Y
301 CAGGCTCCGC AGGGTTCCCG TTCCCTGACC CCGTGACCT GCGGTTCCCTC CGACCTGTAC
GTCCGAGGCG TCCCAAGGCG AAGGGACTGG GGCACGTGGA CGCCAAGGAG GCTGGACATG

L V T R H A D V I P V R R R G D S R G S
361 CTGGTTACCC GTCACGCTGA CGTTATCCCG GTTCGTCGTC TGGGTGACTC CCGTGGTTCC
GACCAATGGG CAGTGCGACT GCAATAGGGC CAAGCAGCAG CACCACTGAG GGCACCAAGG

L L S P R P I S Y L K G S S G G P L L C
421 CTGCTGTCCC CGCGTCCGAT CTCCTACCTG AAAGGTTCTT CCGGTGGTCC GCTGCTGTGC
GACGACAGGG GCGCAGGCTA GAGGATGGAC TTTCCAAGGA GGCCACCAGG CGACGACACG

P A G H A V G I F R A A V S T R G V A K
481 CCGGCTGGTC ACGCTGTTGG TATCTTCCGT GCTGCTGTTT CCACCCGTGG TGTGCTAAA
GGCCGACCAG TGCACAAACC ATAGAAGGCA CGACGACAAA GGTGGGCACC ACAACGATTT

A V D F I P V E S L E T T M R S P *
541 GCTGTTGACT TCATCCCGGT TGAATCCCTG GAAACCACCA TGCGTTCCTC GTGA
CGACAACTGA AGTAGGGCCA ACTTAGGGAC CTTTGGTGGT ACGCAAGGGG CACT

FIG. 17

M K K K G S V V I V G R I N L S G D T A
 1 ATGAAAAAA AAGGATCCGT TGTTATCGTC GGCCGTATCA ACCTGTCCGG TGACACCGCT
 TACTTTTTTT TTCCTAGGCA ACAATAGCAG CCGGCATAGT TGGACAGGCC ACTGTGGCGA

 Y A Q Q T R G L L G C I I T S L T G R D
 61 TACGCTCAGC AGACTCGAGG TCTGCTGGGT TGCATCATCA CCTCCCTGAC CGGTCGTGAC
 ATGCGAGTCG TCTGAGCTCC AGACGACCCA ACGTAGTAGT GGAGGGACTG GCCAGCACTG

 K N Q V E G E V Q I V S T A A Q T F L A
 121 AAAAACCAGG TTGAAGGTGA AGTTCAGATC GTTTCACCG CTGCTCAGAC CTTCCTGGCT
 TTTTGGTCC AACTTCCACT TCAAGTCTAG CAAAGGTGGC GACGAGTCTG GAAGGACCGA

 T C I N G V C W T V Y H G A G T R T I A
 181 ACCTGCATCA ACGGTGTTTG CTGGACCGTT TACCACGGTG CTGGTACCCG TACCATCGCT
 TGGACGTAGT TGCCACAAAC GACCTGGCAA ATGGTGCCAC GACCATGGGC ATGGTAGCGA

 S P K G P V I Q M Y T N V D K D L V G W
 241 TCCCCGAAAG GTCCGGTTAT CCAGATGTAC ACCAACGTTG ACAAAGACCT GGTGTTGG
 AGGGGCTTTC CAGGCCAATA GGTCTACATG TGTTTGCAAC TGTTTCTGGA CCAACCAACC

 P A P Q G S R S L T P C T C G S S D L Y
 301 CCGGCTCCGC AGGGTTCCCG TTCCCTGACC CCGTGCACCT GCGGTTCCCTC CGACCTGTAC
 GGCCGAGGCG TCCCAAGGGC AAGGGACTGG GGCACGTGGA CGCCAAGGAG GCTGGACATG

 L V T R H A D V I P V R R R G D S R G S
 361 CTGGTTACCC GTCACGCTGA CGTTATCCCG GTTCGTCGTC GTGGTGACTC CCGTGGTTCC
 GACCAATGGG CAGTGCGACT GCAATAGGGC CAAGCAGCAG CACCACTGAG GGCACCAAGG

 L L S P R P I S Y L K G S S G G P L L C
 421 CTGCTGTCCC CGCGTCCGAT CTCCTACCTG AAAGGTTCCCT CCGGTGGTCC GCTGCTGTGC
 GACGACAGGG GCGCAGGCTA GAGGATGGAC TTTCCAAGGA GGCCACCAGG CGACGACACG

 P A G H A V G I F R A A V C T R G V A K
 481 CCGGCTGGTC ACGCTGTTGG TATCTTCCGT GCTGCTGTTT GCACCCGTGG TGTTGCTAAA
 GGCCGACCAG TGCGACAACC ATAGAAGGCA CGACGACAAA CGTGGGCACC ACAACGATTT

 A V D F I P V E S L E T T M R S P *
 541 GCTGTTGACT TCATCCCGGT TGAATCCCTG GAAACCACCA TGCGTTCCCC GTGA
 CGACAACCTGA AGTAGGGCCA ACTTAGGGAC CTTTGGTGGT ACGCAAGGGG CACT

FIG. 18